Abstract

The present invention provides, as a method of analyzing the C-terminal amino acid sequence of a peptide with use of reaction technique for successively releasing the C-terminal amino acids, in which undesirable side reactions, such as cleavage of a peptide bond at the middle of the peptide, can be prevented and chemical treatments therein can be carried out under widely applicable conditions in the course of successive release of the C-terminal amino acids from a peptide, such a method comprising steps of dehydrating the gel on which a target peptide that has been separated by gel electrophoresis is held in the bound state; immersing it in a mixture solution of an alkanoic acid anhydride added with a small amount of a perfluoroalkanoic acid in a dipolar aprotic solvent to re-swell the gel carrier, forming a 5-oxazolone structure, at a temperature chosen in the range of from 30ºC to 80ºC, followed by the cleavage of the 5-oxazolone ring to release the C-terminal amino acids, and then specifying the C-terminal amino acid sequence of the peptide based on the measured decrease in the molecular weight of a series of reaction products resulting therefrom.